

Amendment To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented): A method for electrofilling a metal or alloy inside at least one opening surrounded by a field on a front surface of a substrate, wherein at least one surface inside the at least one opening comprises an exposed metallic surface, said method comprising steps of:

(a) immersing the substrate in an activation or wetting solution;

(b) applying ultrasonic or megasonic vibrations to the substrate; and
after commencing step (b):

(c) applying high pressure jets of an electrolyte to the substrate, said electrolyte comprises metallic ions of said metal or alloy; and

(d) applying an electroplating current to the substrate to electroplate said metal or alloy inside the at least one opening;

wherein the activation or wetting solution is the same as the electrolyte, and wherein steps (a), (b), (c), and (d) are performed in the same chamber.

2. (previously presented): The method of claim 1 wherein the electrolyte comprises at least one inhibitor additive.

3. (currently amended): The method of claim 1 wherein the at least one opening has a bottom surface comprising an exposed metallic surface, and a sidewall surface comprising a non-metallic surface.

4. (previously presented): The method of claim 1 wherein the at least one opening has a sidewall surface comprising an exposed metallic surface.

5. (previously presented): The method of claim 1 wherein the at least one opening has a bottom surface comprising an exposed metallic surface, and a sidewall surface comprising an exposed metallic surface.

6. (previously presented): The method of claim 1 wherein step (b) is continued during at least a portion of steps (c) and (d).

7. (previously presented): The method of claim 2 wherein the at least one opening has a bottom surface comprising an exposed metallic surface, and a sidewall surface comprising a non-metallic surface.

8. (previously presented): The method of claim 2 wherein the at least one opening has a sidewall surface comprising an exposed metallic surface.

9. (previously presented): The method of claim 2 wherein the at least one opening has a bottom surface comprising an exposed metallic surface, and a sidewall surface comprising an exposed metallic surface.

10. (previously presented): The method of claim 2 wherein step (b) is continued during at least a portion of steps (c) and (d).

11. Cancelled.

12. Cancelled.

21. Cancelled.

22. Cancelled.

23. Cancelled.

24. Cancelled.

25. Cancelled.

26. Cancelled.

27. Cancelled.

28. Cancelled.

29. (previously presented): A method for electroplating a metal or alloy inside at least one opening surrounded by a field on a front surface of a substrate, wherein at least one surface inside the at least one opening comprises an exposed metallic surface, said method comprising steps of:

(a) immersing the substrate in an electrolyte contained in an electroplating chamber, said electrolyte comprising metallic ions of said metal or alloy;

(b) applying ultrasonic or megasonic vibrations to the substrate; and
after commencing step (b):
(c) producing turbulent flow of the electrolyte at a surface of the substrate; and
(d) applying an electroplating current to the substrate to electroplate said metal or alloy inside the at least one opening;

wherein steps (a), (b), (c), and (d) are performed in the electroplating chamber.

30. (previously presented): The method of claim 29 wherein the at least one opening has a bottom surface comprising an exposed metallic surface, and a sidewall surface comprising a non-metallic surface.

31. (previously presented): The method of claim 29 wherein the at least one opening has a sidewall surface comprising an exposed metallic surface.

32. (previously presented): The method of claim 29 wherein the at least one opening has a bottom surface comprising an exposed metallic surface, and a sidewall surface comprising an exposed metallic surface.

33. (previously presented): The method of claim 29 wherein step (b) is continued during at least a portion of steps (c) and (d).

34. (previously presented): The method of claim 29 wherein the electrolyte comprises at least one inhibitor additive.

35. (previously presented): The method of claim 34 wherein the at least one opening has a bottom surface comprising an exposed metallic surface, and a sidewall surface comprising a non-metallic surface.

36. (previously presented): The method of claim 34 wherein the at least one opening has a sidewall surface comprising an exposed metallic surface.

37. (previously presented): The method of claim 34 wherein the at least one opening has a bottom surface comprising an exposed metallic surface, and a sidewall surface comprising an exposed metallic surface.

38. (previously presented): The method of claim 34 wherein step (b) is continued during at least a portion of steps (c) and (d).

39. (currently amended): A method for electroplating a metal or alloy inside at least one opening surrounded by a field on a front surface of a substrate, wherein at least one

surface inside the at least one opening comprises an exposed metallic surface, said method comprising steps of:

(a) immersing the substrate in an electrolyte ~~contained in an electroplating chamber~~, said electrolyte comprising metallic ions of said metal or alloy and at least one inhibitor additive;

(b) applying ultrasonic or megasonic vibrations to the substrate; and
after commencing step (b):

(c) agitating the electrolyte across the front surface of the substrate; and

(d) applying an electroplating current to the substrate to electroplate said metal or alloy inside the at least one opening;

wherein inside surfaces of the at least one opening are wetted by utilizing steps (a) and (b) alone.

40. (previously presented): The method of claim 39 wherein the at least one opening has a bottom surface comprising an exposed metallic surface, and a sidewall surface comprising a non-metallic surface.

41. (previously presented): The method of claim 39 wherein the at least one opening has a sidewall surface comprising an exposed metallic surface.

42. (previously presented): The method of claim 39 wherein the at least one opening has a bottom surface comprising an exposed metallic surface, and a sidewall surface comprising an exposed metallic surface.

43. (previously presented): The method of claim 39 wherein step (b) is continued during at least a portion of steps (c) and (d).